

## REMARKS

Claim 2 has been rewritten in independent form, and claim 1 has been cancelled. Accordingly, claims 2-34 remain pending in this application.

Claims 1-34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Application No. US 2003/0026282 (*Gross*) in view of U.S. Patent Application No. US 2003/0103559 (*Palm*).

*Gross* is directed to a modem for use in a communications system that avoids the need for voice and data splitters. *Gross*, paragraph 21. *Gross* describes a modem that responds to disruptions associated with “disturbance events,” such as on-hook to off-hook transmissions by rapidly switching between pre-stored channel parameter control sets during communications over the loop under varying conditions. *See* Abstract. [emphasis provided] In addition to changing pre-stored parameter control sets, *Gross* describes a modem that changes transmission power levels. *Id.*

In particular, *Gross* describes performing a “fast train” in response to a disturbance event. *See* paragraph [57]. According to *Gross*, the modem performs a “fast train” in order to characterize communications under the new operating conditions and determine a power level to be used for communications. *Id.* Thus, *Gross* states that the transmission power level is adjusted after the “fast train.” *Id.* Or put another way, the “fast train” is performed so that an appropriate power level may be subsequently determined. *Gross* does not teach performing a “fast train” or

any other training process in response to adjusting the power level. Accordingly, **Gross** does not teach or disclose performing the “fast train” (or any other training process) in a low power mode.

In contrast, and as is described in the patent application, one or more embodiments of the present invention are directed to performing training in a low power mode (as opposed to a high power mode). *See* page 17, lines 1-7 of the patent application. The patent application highlights one or more advantages of performing training in the low power mode, which may include reducing cross-talk (and thus interference in adjacent lines), conservation of power during the training process, and the like. *Id.* The patent application describes various exemplary ways of determining a low power mode, which may include iteratively increasing the transmission power until a successful connection is established or it may include determining a lower power level based on previously stored transmission power levels. *See* page 12, line 11 – page 12, line 6. These inventive aspects of the invention are further captured in claims 29, 30, 31, 32, and 34. Of course, in other embodiments, other suitable ways of establishing a connection in a low power mode may also be employed.

As noted, claim 2 has been re-written in independent form. Claim 2 calls for establishing a communication channel between a first transceiver and a second transceiver in low power mode. The Examiner asserts that **Gross** (paragraphs 58-63 and element 212 of Figure 8) and **Palm** (paragraph 131) teach this claimed feature of claim 2. *See* page 2 of the Office Action.

Claim 2 further calls for determining a training parameter in response to establishing the communication channel in the low power mode and performing training in response to determining the training parameter. [emphasis provided]. Thus, according to claim 2, at least

one training parameter is determined in response to establishing the communication channel in the lower power mode. The Examiner, in the Office Action, does not expressly identify what in **Gross** corresponds to the “training parameter” of claim 2. Because claim 2 calls for determining at least one training parameter in response to establishing the communication channel in low power mode, it appears that the Examiner considers the frequency domain equalizers (“FDQ’s”) of **Gross** (see Figure 8) to correspond to this claimed feature. This assumption is based at least in part on the Examiner’s reliance on paragraphs 50, 53, 64-65 of **Gross** to reject the claimed features of claim 2. See page 2 of Office Action. Paragraph 50 generally indicates that disturbance events may be detected by monitoring selected transmission characteristics. Paragraph 53 describes that disturbance events may be detected by monitoring a signal (*i.e.*, monitor signal such as pilot tone). And Paragraphs 64-65 state that, in response to detecting a disturbance event, a change may be made in frequency domain equalizers (“FDQ’s”), which comprise finite impulse filters with complex coefficients that may be set during “initialization” and “training” during initialization. Figure 8 of **Gross** indicates that the ATU can retrain “equalizers and echo cancellers” at element 220.

Claim 2 further calls for providing the training parameter to the second transceiver. **Gross** expressly teaches, in paragraph 31, that frequency domain equalizer coefficients and echo canceller coefficients are “local” to each transceiver, and are not transmitted to the remote receiver. Thus, **Gross** at least does not teach providing the training parameter (which is calculated in response to establishing communications in low power mode) to the remote station. While **Gross** indicates that bit allocations and channel gains may be transmitted to the remote receiver, **Gross** does not teach that these parameters are calculated in response to establishing

communications in low power mode; rather, **Gross** teaches that these parameters are calculated before the power level is adjusted, and in particular during the “fast retrain” mode. See paragraph 57 of **Gross**; see also Figure 8 that illustrates that retrain occurs (at 202) before the transmit power level is established at 208. Accordingly, for at least this reason, claim 2, and claims depending from it, is allowable.

Other independent claims 12, 21, 28, and 33 are allowable for at least the reasons cited above. Additionally, the claims depending from these independent claims are also allowable for at least the reasons cited above.

Claims 30, 31, 32, and 34 call for selecting a power level based on previously stored priori power level estimations. The Examiner has failed to provide any references that teach this claimed feature. Because the Office **cites no references** to support this “obviousness” assertion, the Applicant infers that the Examiner makes this assertion based on **personal knowledge**. However, no **supporting affidavit** has been made of record. The Applicant respectfully requests that prior art be provided to substantiate this “obviousness” assertion or that an **affidavit** be filed in accordance with 37 C.F.R. § 1.104(d)(2), which states (emphasis added):

(2) When a rejection in an application is based on facts **within the personal knowledge** of an employee of the Office, the data shall be as specific as possible, and **the reference must be supported, when called for by the applicant, by the affidavit of such employee**, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant and other persons.

Consequently, the Applicant respectfully and seasonably requests the Office to either (1) **cite a reference** in support of this position, or (2) **provide a Rule 104(d)(2) affidavit** from the Examiner supporting any **facts within the personal knowledge of the Examiner**, as also set forth in **M.P.E.P. § 2144.03**.

In light of the arguments presented above, Applicant respectfully asserts that claims 2-34 are allowable. Accordingly, a Notice of Allowance is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the undersigned attorney hereby requests an interview with the Examiner to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,

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